

(12) INTERNATIONAL REGISTRATION PUBLISHED UNDER THE AGREEMENT ON  
INTERNATIONAL COOPERATION IN THE AREA OF PATENTS (PCT)

(19) World Organization for Intellectual Property [emblem]  
International Office

[bar code]

(43) International Publication Date  
June 24, 2004 (06/24/2004)

PCT

(10) International Publication Number  
WO 2004/053013 A2

(51) International Patent Classification: C09K 3/14

(21) International File Number: PCT/EP2003/013911

(22) International Registration Date:  
December 09, 2003 (12/03/2003)

(25) Submission Language: German

(26) Publication Language: German

(30) Information re Priority:  
102 57 554.1 December 10, 2002 (12/10/2002) DE

(71) Registrant: (for all destination states except US):  
**TREIBACHER SCHLEIFMITTEL GMBH**  
[DE/DE]; Ferroweg 1, 79725 Laufenburg (DE)

(72) Inventor; and

(75) Inventor/Registrant (only for US): **ZEIRINGER,**  
**Hans** [AT/AT]; Passering 48, A-8321 Kappeln  
(AT).

**WURZER, Thomas** [AT/AT]; Unterwinklern 19,  
A-9220 Velden (AT).

(74) Attorney: **WESTPHAL, MUSSGNUMG &**  
**PARTNERS**; Am Riettor 5, 78048 Villingen-  
Schwenningen (DE).

(81) Destination States (national): JP, US.

(84) Destination States (regional): European Patent  
AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FL,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, ST, SK, TR).

**Published:**

- without international search report and  
to be republished upon receipt of the report

*For an explanation of the two-letter codes and the other  
abbreviations, reference is made to the Explanations  
("Guidance Notes on Codes and Abbreviations") at  
The beginning of each regular issue of the PCT Gazette.*

(54) Designation: **ABRASIVE WITH IMPROVED ABRASIVE PROPERTIES**

(57) Summary: Abrasive particles from the group of conventional abrasive particles, in particular fused or sintered corundums, zirconium corundums, silicon corundums, silicon carbides and boron carbide, for application in synthetic resin-bonded abrasives, characterized by the fact that on the surface they are provided with a coating consisting of 0.05 to 2.0 weight percent, relative to the weight of the untreated abrasive particle, of an aqueous binding agent on silicon basis and 0.05 to 5.0 weight percent, also relative to the weight of the untreated abrasive particle, of a complex, fine grained oxide compound of the general formula  $A_xB_yO_z$ , with A and B each being a group of elements and O being oxygen present in a stoichiometric ratio to A and B, and whereby the numbers x, y and z denote the composition of the complex oxides without being limited to whole numbers, and z corresponds to a product of the sum of (x+y) and a factor of between 1.5 and 2.5. The group of elements A concerns the group of metals in the periodic system of elements, while the group of elements B concerns the group of amphoteric elements in the periodic system. The complex, fine grained oxide compound  $A_xB_yO_z$  contains at least one element each from the group of metals and one element from the group of amphoteric elements of the periodic system. The aqueous binder on silicon basis is preferably colloidal silicic acid. Method for the coating of the abrasive particles in which the coated abrasive particles are subjected to a heat treatment between 100 and 900° C.